§ 1630.4 Test procedure.

(a) *Apparatus*—(1) *Test chamber.* The test chamber shall consist of an open top hollow cube made of noncombustible material[1] with inside dimensions 30.48 × 40.48 × 30.48 cm. (12 × 12 × 12 in.) and a minimum of 6.35 (¼ in.) wall thickness. The flat bottom of the box shall be made of the same material as the sides and shall be easily removable. The sides shall be fastened together with screws or brackets and taped to prevent air leakage into the box during use.

NOTE: A minimum of two chambers and two extra bottoms is suggested for efficient operation.

(2) *Flattening frame.* A steel plate, 22.86 × 22.86 cm. (9 × 9 in.), 6.35 mm. (¼ in.) thick with a 20.32 cm. (8 in.) diameter hole in its center is required to hold the carpet or rug flat during the course of the test. It is recommended that one be provided for each test chamber.

(3) *Standard igniting source.* No. 1588 methenamine timed burning tablet or an equal tablet. These tablets shall be stored in a desiccator over a desiccant for 24 hours prior to use. (Small quantities of absorbed water may cause the tablets to fracture when first ignited. If a major fracture occurs, any results from that test shall be ignored, and it shall be repeated.)

(4) *Test specimens.* Each test specimen shall be a 22.86 × 22.86 cm. (9 × 9 in.) section of the carpet or rug to be tested. Eight specimens are required.

(5) *Circulating air oven.* A forced circulation drying oven capable of removing the moisture from the specimens when maintained at 105 °C. (221 °F.) for 2 hours.[2]

(6) *Desiccating cabinet.* An airtight and moisture tight cabinet capable of holding the floor covering specimens horizontally without contacting each other during the cooling period following drying, and containing silica gel desiccant.

(7) *Gloves.* Nonhygroscopic gloves (such as rubber polyethylene) for handling the sample after drying, and raising the pile on specimens prior to testing.

(8) *Hood.* A hood capable of being closed and having its draft turned off during each test and capable of rapidly removing the products of combustion following each test. The front or sides of the hood should be transparent to permit observation of the tests in progress.

(9) *Mirror.* A small mirror mounted above each test chamber at an angle to permit observation of the specimen from outside of the hood.

(10) *Vacuum cleaner.* A vacuum cleaner to remove all loose material from each specimen prior to conditioning. All surfaces of the vacuum cleaner contacting the specimen shall be flat and smooth.

(b) *Sampling*—(1)(i) *Selection of samples.* Select a sample of the material representative of the lot and large enough to permit cutting eight test specimens 22.86 × 22.86 cm. (9 × 9 in.), free from creases, fold marks, delaminations, or other distortions. The test specimens should contain the most flammable parts of the traffic surface at their centers. The most flammable area may be determined on the basis of experience or through pretesting.

(ii) If the carpet or rug has had a fire-retardant treatment, or is made of fibers which have had a fire-retardant treatment, the selected sample or oversized specimens thereof shall be washed, prior to cutting of test specimens either 10 times under the washing and drying procedure prescribed in Method 124–1967 of the American Association of Textile Chemists and Colorists [washing procedure 6.2 (III) with a water temperature of 60°±2.8 °C. (140°±5 °F.), drying procedure 6.3.2(B), maximum load 3.64 kg. (8 pounds)],[3] or such number of times under such other washing and drying procedure as shall previously have been found to be equivalent by the Consumer Product Safety

[1] 6.35 mm (¼ in.) cement asbestos board is a suitable material.

[2] Option 1 of ASTM D 2654–67T, ''Methods of Test for Amount of Moisture in Textile Materials,'' describes a satisfactory oven. (''1969 Book of ASTM Standards,'' part 24, published by the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.)

[3] Technical Manual of the American Association of Textile Chemists and Colorists, Vol. 45, 1969, published by AATCC, Post Office Box 12215, Research Triangle Park, N.C. 27709.

Commission. Alternatively, the selected sample or oversized specimens thereof may be washed, dry-cleaned, or shampooed 10 times, prior to cutting of test specimens, in such manner as the manufacturer or other interested party shall previously have established to the satisfaction of the Consumer Product Safety Commission is normally used for that type of carpet or rug in service.

(2) *Cutting.* Cut eight 22.86±0.64 cm. (9±¼ in.) square specimens of each carpet or rug to be tested to comply with paragraph (b)(1) of this section.

(c) *Conditioning.* (1) Clean each specimen with the vacuum cleaner until it is free of all loose ends left during the manufacturing process and from any material that may have been worked into the pile during handling.[4] Care must be exercised to avoid ''fuzzing'' of the pile yarn.

(2) Place the specimens in the drying oven in a manner that will permit free circulation of the air at 105 °C. (221 °F.) around them for 2 hours.[5] Remove the specimens from the oven with gloved hands and place them horizontally in the desiccator with traffic surface up and free from contact with each other until cooled to room temperature, but in no instance less than 1 hour.

(d) *Testing.* (1) Place the test chamber in the draft-protected environment (hood with draft off) with its bottom in place. Wearing gloves, remove a test specimen from the desiccator and brush its surface with a gloved hand in such a manner as to raise its pile. Place the specimen on the center of the floor of the test chamber, traffic surface up, exercising care that the specimen is horizontal and flat. Place the flattening frame on the specimen and position a methenamine tablet on one of its flat sides in the center of the 20.32 cm. (8 in.) hole.

(2) Ignite the tablet by touching a lighted match or an equivalent igniting source carefully to its top. If more than 2 minutes elapse between the removal of the specimen from the desiccator and the ignition of the tablet, the conditioning must be repeated.

(3) Continue each test until one of the following conditions occurs:

(i) The last vestige of flame or glow disappears. (This is frequently accompanied by a final puff of smoke.)

(ii) The flaming or smoldering has approached within 2.54 cm. (1.0 in.) of the edge of the hole in the flattening frame at any point.

(4) When all combustion has ceased, ventilate the hood and measure the shortest distance between the edge of the hole in the flattening frame and the charred area. Record the distance measured for each specimen.

(5) Remove the specimen from the chamber and remove any burn residue from the floor of the chamber. Before proceeding to the next test, the floor must be cooled to normal room temperature or replaced with one that is at normal room temperature.

(e) *Report.* The number of specimens of the eight tested in which the charred area does not extend to within 2.54 cm. (1.0 in.) of the edge of the hole in the flattening frame shall be reported.

(f) *Interpretation of results.* If the charred area does not extend to within 2.54 cm. (1.0 in.) of the edge of the hole in the flattening frame at any point for at least seven of the eight specimens, the carpet or rug meets the acceptance criterion.

[4] The vacuum cleaning described is not intended to simulate the effects of repeated vacuum cleaning in service.

[5] If the specimens are moist when received, permit them to air-dry at laboratory conditions prior to placement in the oven. A satisfactory preconditioning procedure may be found in ASTM D 1776–67, ''Conditioning Textiles and Textile Products for Testing.'' (''1969 Book of ASTM Standards'', part 24, published by the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.)

§ 1630.5 Labeling.

If the carpet or rug has had a fire-retardant treatment or is made of fibers which have had a fire-retardant treatment, it shall be labeled with the letter ''T'' pursuant to conditions established by the Consumer Product Safety Commission.